DOCKET SECTION

MPA-T-2

BEFORE THE
POSTAL RATE COMMISSION
WASHINGTON, D.C. 20268-0001

POSTAL RATE AND FEE CHANGES, 1997

Docket No. R97-1

DIRECT TESTIMONY
OF
RITA D. COHEN
ON BEHALF OF
MAGAZINE PUBLISHERS OF AMERICA

TABLE OF CONTENTS

EXHIBITS:

Exh. MPA-2A:	USPS Current and Proposed Methods for Distributing Mail Processing Costs to Subclass/Special Service
Exh. MPA-2B:	Stralberg-Cohen Distribution Method for Mail Processing Costs
Exh. MPA-2C:	Modified Attribution of BY96 Segment 3 Costs
Exh. MPA-2D:	Attributed BY96 Clerk & Mailhandler Wage Costs ($000s)
Exh. MPA-2E:	Calculation of Volume-Variable Cost Based Upon Base Productivity
Exh. MPA-2F:	Test Year Attributable Cost by Subclass with Stralberg-Cohen Clerks and Mailhandlers Methodology and MPA Rural Carriers Methodology
Exh. MPA-2G:	Test Year Attributable Cost by Subclass with Stralberg-Cohen Clerks and Mailhandlers (Treating Inefficient Mixed and Not Handling Costs as Institutional) Methodology and MPA Rural Carriers Methodology

I. AUTOBIOGRAPHICAL SKETCH

My name is Rita Dershowitz Cohen. I am Vice President for Economic and Legislative Analysis at the Magazine Publishers of America (MPA). I am responsible for postal, tax, environment, state, and consumer protection issues. As part of my postal responsibilities, I am MPA's association executive for the Mailers Technical Advisory Committee (MTAC) and participate in several MTAC working groups, a member of the Postal Service's Periodicals Advisory Group, a postal advisor to MPA's Smaller Magazine Advisory Council, and a frequent speaker on postal topics.

I attended the University of Pennsylvania, receiving a bachelor's degree in statistics and a master's degree in business and applied economics. I received the J. Parker Burst prize for outstanding achievement in statistics.

Following my formal education, I worked as a statistician at the Postal Rate Commission (PRC) for two years, testifying in Docket No. R74-1 on the issue of second-class costing methodology. In 1975, I joined the Postal Service (USPS) as a cost analyst in the Revenue and Cost Analysis Division. I was employed by the Postal Service for ten years, including four years as an operations research analyst in the Mail Classification Research Division and four years as a principal operations research analyst in the Office of Rates. I conducted analyses of postal costs in various cost segments and worked on classification and rate issues in various postal rate and classification cases during that period. I testified on the roll-forward model used to project costs in Docket No. R77-1.

In 1985, I left the Postal Service to join Buc & Associates, Inc., which in 1986 became part of ICF, Incorporated, a consulting firm based in Fairfax, Virginia. I worked at ICF until 1995, becoming a Vice President in 1993. I directed and performed economic and policy analyses for both governmental and private clients, including MPA, McGraw-Hill, and the National Newspaper Association (NNA). In Docket No. R87-1, I testified on carrier street time for MPA

and second-class presort discounts for NNA. Continuing my representation of MPA, I proposed a rate design for second-class regular rate and nonprofit in Docket No. R90-1 and testified on cost savings likely from introduction of the barcode discount for flats in Docket No. MC 91-1. In Docket No. R94-1, I testified on the In-Office Cost System and the Postal Service's distribution of mail processing costs to classes and subclasses.

In 1995, I joined MPA, and assumed my current position in January 1996. I continue to analyze postal issues and prepare testimony as I have done for my entire professional career. On behalf of MPA, I presented both direct and rebuttal testimony in the reclassification case, Docket No. MC 95-1, presenting alternative structures and rate designs for the proposed publications service subclass.

II. PURPOSE AND SCOPE OF TESTIMONY AND SUMMARY OF CONCLUSIONS

The purpose of this testimony is to describe my review and evaluation of the Postal Service's proposed procedures for distributing mail processing costs to classes and subclasses of mail in this case and to suggest alternatives to the distribution methodologies proposed by witness Degen. The methodologies proposed by me and witness Stralberg (*see* TW-T-1) are a substantial improvement over the distribution proposed by witness Degen. We offer two alternatives.

First, we offer an alternative distribution methodology based on three fundamental principles:

1. The distribution methodology should avoid unsupported assumptions to the greatest extent possible;
2. Distribution procedures should use all verifiable and relevant data collected in the IOCS upon which reasonable inferences of causation can be based; and
3. Pending the development of more complete cost information, cost distributions should generally be done as they have in the past since there is currently no better alternative.

Our suggested methodology is described in Part V of this testimony.

Second, we offer alternative approaches which recognize that we do not have the data to distribute many of these costs with confidence. We suggest that a portion of these costs be treated as institutional.

Unfortunately, neither we nor the Postal Service possess all the data needed to perform a precise distribution of mail processing costs. Our suggested methodologies are simply the best available at the current time. They are certainly more rationale, and therefore more reasonable and equitable than those proposed by witness Degen. I strongly recommend that the Postal Service undertake to collect the additional information needed to develop appropriate distribution keys for this cost segment.

As described by witness Degen, the Postal Service's proposed mail processing cost distribution is a departure from the IOCS/LIOCATT methodology used by the Commission since the early 1970s. While still using some IOCS information, the proposed distribution replaces the LIOCATT mixed-mail and overhead cost distribution procedure with a methodology using data from the Management Operating Data System (MODS). Witness Degen suggests that he developed his proposed methodology in response to, and that he "squarely addresses," past criticisms of the existing mail processing cost distribution system. As described in both my testimony and witness Stralberg's, this assessment is incorrect. His proposed methodology neither squarely addresses nor overcomes legitimate past criticisms of the Postal Service's mail processing cost distribution.

Rather than improving the distribution of mail processing costs to classes and subclasses, witness Degen has exacerbated the distribution problems associated with mixed mail and overhead costs. The distributions that witness Stralberg and I present, which are more consistent with the Commission-accepted IOCS/LIOCATT procedures, while not eliminating the existing distribution anomalies, at least avoids exacerbating them. Contrary to witness Degen's assertions, the Postal Service's new methodology does not answer questions raised in past cases by the Commission and intervenors, particularly with regard to the reported costs for Periodicals. There is a continuing need for analysis and

improvement in the Postal Service's distribution procedures to try to explain and rectify the large and anomalous increase in Periodicals costs in recent years.

In part III of my testimony, I summarize concerns raised by Periodicals mailers in dockets R90-1, RM92-2, and R94-1, as well as with Postal Service management, about the alarming and inexplicable growth in mail processing costs distributed to Periodicals in recent years.

In part IV, I explain how the Postal Service's proposed distribution of costs to classes and subclasses actually exacerbates the Periodicals cost problem rather than providing an answer to our legitimate questions. I explain why witness Stralberg and I still believe Periodicals costs are incorrectly measured and overstated, and describe the unfounded assumptions that underlie witness Degen's proposed distribution of mixed-mail and not-handling costs (which include the majority of traditionally defined overhead costs – breaks and personal needs, clocking in and out, and moving empty equipment – as well as some costs traditionally defined as mixed mail) in the mail processing, window service, and administrative cost components.

In developing my testimony, I have consulted with witness Stralberg, who has been examining the Periodicals cost problem, in particular, and IOCS, in general, since Docket No. R90-1, and who has developed a number of modifications to witness Degen's methodology that avoid reliance on unsubstantiated assumptions. Witness Stralberg's testimony summarizes these modifications, which in large part rely on existing Commission-approved procedures. I believe that witness Stralberg's modifications, while not a long-term solution, are a substantial improvement over the distribution of costs to classes and subclasses proposed by witness Degen.

In part V, I describe how I have integrated these modifications into the Postal Service's clerk and mailhandler distribution methodology as presented in USPS-LR-H-146. My proposed distribution is summarized in part V and details are provided in MPA-LR-1. I also describe an alternative approach to the distribution of not-handling costs, explaining why some not-handling costs should properly be treated as institutional.

In part VI of my testimony, I explain the need for the Postal Service to continue to examine the distribution of mail processing costs to more accurately reflect cost causation. I urge the Commission to act cautiously in setting rates for Periodicals in this case in light of continuing questions and anomalous results.

III. UNEXPLAINED AND EXCESSIVE INCREASES IN MAIL PROCESSING COSTS FOR PERIODICALS

As acknowledged by witness Degen, the Postal Service's methodology for attributing and distributing mail processing costs for clerks and mailhandlers has been repeatedly questioned and criticized by the Postal Rate Commission and intervenors in past cases. This section reviews and summarizes the repeated efforts of numerous participants and, indeed, the Commission itself, to understand the puzzling trends in mail processing costs for Periodicals.[1] Despite diligent efforts, these trends remain largely unexplained. A problem clearly persists, and the USPS has made no meaningful effort to address it.

A. Mail Processing Cost Trends for Periodicals from 1986-1997

MPA witness Little points out that mail processing unit costs for Periodicals increased by 71 percent from fiscal year 1986 through fiscal year 1996. During this same period mail processing unit costs for First-Class Mail, Standard A, and Standard B increased by only 35, 20, and 31 percent respectively. Little also notes that during this period USPS wage rates increased by only 41 percent – about one half of the increase in Periodicals mail processing costs.[2]

The disproportionate increase in mail processing costs occurred during a period when the USPS increased worksharing incentives (presort, automation, and dropship discounts) and invested billions in automation. As a result of these incentives, Periodicals mailers today do much work previously performed by USPS employees. In addition, Periodicals mailers have undertaken other

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[1] Others have recounted this history in detail. *See*, e.g., Docket No. R94-1, TW Brief, at 12-36.
[2] MPA-T-1 at 3. Cost increases are estimated holding subclass shares of class volume constant over the 11-year period.

activities to reduce the cost of processing their mail, such as shifting Periodicals from sacks to pallets and other types of containers.

B. Docket No. R90-1

Periodicals and other mailers raised the issue of these unexplained and excessive cost increases in Docket No. R90-1. Witnesses Stralberg and King reasoned that these increases were probably due to the reassignment of excess workers from automated to manual mail processing operations.[3] These workers became, in effect, "automation refugees."

The PRC was sufficiently interested in the question to issue a notice of inquiry.[4] In the end, however, the PRC did not address the problem directly and, in the absence of sufficient substantive data to support an alternative, relied on a presumption in favor of the traditional method of cost allocation supported by IOCS tallies.[5]

C. Docket No. RM92-2

In June, 1992, a number of parties petitioned the PRC to initiate a rulemaking proceeding to investigate the anomalous increases in mail processing costs since 1986.[6] Among other things, the petitioners sought to obtain data and analysis in the sole possession of the USPS, such as a Foster Associates study undertaken by USPS witness Hume during Docket No. R90-1.[7]

The USPS refused to cooperate with the petitioners and the PRC. In January, 1994, the PRC terminated the proceeding, stressing "[t]he Service, by its actions in resisting inquiry, has not only failed to dispel the concerns of the rate payers and the Commission, it has if anything heightened them."[8] The PRC noted

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[3] Docket No. R90-1, Tr. 27/13295-302 (witness Stralberg); Tr. 27/13473-82 (witness King).
[4] Second Notice of Inquiry, Order No. 871 (July 18, 1990).
[5] PRC Op. R90-1, App. J at 10, 11.
[6] Docket No. RM92-2, Petition to Initiate a Rulemaking Proceeding to Consider the Costing of Automation-Related Mail Processing Costs (June 26, 1992)(hereafter Petition). The petitioners were AMMA, ADVO, DMA, Dow Jones, Harte Hanks Shoppers, MPA, MOAA, and Time Warner.
[7] Petition at 8.
[8] PRC Order No. 1002 (January 14, 1994) at 4.

that "[t]he petitioners have advanced a disturbing theory that these cost increases have been caused by the automation of First-Class Mail" and described the actions of the Postal Service that had effectively prevented analysis of the effect of automation on these costs.[9]

A Foster Associates report was a center of attention in the 1992 rulemaking proceeding. Notwithstanding the fact that the Commission issued two orders to obtain the report,[10] the USPS did not release it until November, 1992, eighteen months after first receiving it.[11]

The report was disappointing, a mere "status report" listing the kinds of data collection and analyses that might be pursued in the future, proving that the Service had not made any progress on the issue since Docket No. R90-1. It provided inadequate support even for instituting formal discovery in Docket No. RM92-2.[12]

D. Docket No. R94-1

In Docket No. R94-1, witness Stralberg again addressed the "automation refugee" problem, and suggested that the In-Office Cost System (IOCS), designed in the early 1970s, was inadequate to distribute mail processing costs in the radically different operating environment of the 1990s. He noted the continued existence of the automation refugee problem, with the USPS still failing to capture the promised workhour reductions from automation. He also described how new procedures for collecting more information about mixed-mail tallies had failed completely, producing biased samples and actually reducing the amount of class-specific information obtained compared with previous procedures. Witness Stralberg pointed out that the sharp increase in mixed-mail and overhead costs (48 percent of all mail processing costs in fiscal year 1993, versus 30 percent in fiscal year 1986), combined with the Postal Service's inability to establish credible

[9] Id. at 1.
[10] PRC Order No. 933 (August 8, 1992); PRC Order No. 935 (October 7, 1992).
[11] PRC Order No. 1002 (January 14, 1994) at 6-7.
[12] Id. at 7.

causal relationships between these costs and specific subclasses, added significantly to the unreliability of the Postal Service's distribution assumptions, and to the essential arbitrariness in the resulting distribution of these costs.[13]

On rebuttal, USPS witness Barker testified that the disproportionate cost increases in Periodicals mail processing costs since 1986 were due to a "combination of factors," but he discussed only one – the "transfer-hub theory."[14] This notion, that increases in mail processing costs were due to the establishment of second class transfer hubs in fiscal year 1985, had been advanced by USPS managers early in 1994, but proved to be erroneous.[15]

In its Opinion, the PRC stated that it believed the questions raised about the IOCS were serious and expressed concern that the Postal Service was not giving them the attention they deserved, causing the number of questions to increase rather than decrease. The PRC noted:

> (1) A number of questions concerning the IOCS and mail processing costs were raised in Docket No. R90-1. There has been virtually no cooperation from the Postal Service with either the Commission or the mailers in dealing with these questions since then, and the record demonstrates that answers have not been found....
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> * * *
>
> (3) Both the number and proportion of mixed-mail tallies in the IOCS are increasing. The questions about how they should be distributed are serious. The Postal Service should review its distribution techniques to assure that the approach adopted 20 years ago remains the most appropriate.
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> (4) The shift to automation has caused a number of questions. The effects of this change are complex and have not been analyzed. Some parties argue that the IOCS may no longer be well-suited to a changed operating system.

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[13] Docket No. R94-1, Tr. 15/7122 et seq.; Tr. 25/11838 et seq. (witness Stralberg).
[14] Docket No. R94-1, Tr. 25/11708-9 (witness Barker).
[15] The transfer hub fiasco occurred in 1985. At the end of that year, the Postal Service was in the process of moving second-class mail back to the BMC's. See Docket No. R87-1, USPS LR-E-103, Postal Inspection Service, "Operations Audit Report: Second-Class Mail" (October 1985). As Time Warner argued, the "transfer-hub theory" could not possibly be right because (1) periodical costs did not decline but remained disproportionately higher after fiscal year 1990 than they had been in fiscal year 1985 when the problem was alleged to have occurred, and (2) the transfer hubs primarily performed platform operations (transfers of sacks and pallets), the costs of which *declined* during the period in question (fiscal year 1986-fiscal year 1989). Docket No. R94-1, TW Brief at 28-29.

(5) Questions exist about the category "working but not handling mail" and about the level of break time....[16]

Nevertheless, the PRC accepted "the IOCS as a basis for rates," since no other was available.[17] However, it cited the uncertainties about the Postal Service's distribution of mail processing costs as a reason for lowering second-class cost coverage.[18]

E. Concerns of Others

Independent experts also have expressed concern about the "automation refugee" problem. In 1990 congressional testimony, the General Accounting *Office (GAO) echoed the views of witness Stralberg in Docket No. R90-1. Its* representative reported that the USPS had failed to achieve the predicted savings from automation because the Service's savings estimates were not backed up with actions to achieve them. Workhours that might have been replaced by automation were not put to effective use elsewhere.[19]

A subsequent May, 1992, GAO report on the automation program indicated that the problem it had identified in 1990, namely that workhours freed by automation were not put to effective use elsewhere, continued to be a problem.[20] The 1992 Report raised a number of questions concerning the efficiency of the automation program, particularly with respect to staffing and reassignment of mail processing personnel. It noted that work years for "other direct work" had increased above plan, perhaps because "employees who have been displaced by automation have been reassigned temporarily to this work."[21] The report also cited inefficiencies in the automation program reported by the Postal Inspection Service.[22]

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[16] PRC Op. R94-1 para. 3023. (emphasis added).
[17] Id. at para 3025.
[18] Id. at 4055.
[19] *Financial Performance of the United States Postal Service*: Statement of Nye Stevens, Director, Government Business Operations Issues, General Government Division, General Accounting Office before the House Committee on Post Office and Civil Service, 101 Cong., 2nd Sess. (February 7, 1990).
[20] *Postal Service: Automation is Restraining But Not Reducing Costs.* (GAO/GGD-92-58)(May 1992).
[21] Id. at 27-29.
[22] Id. at 32.

GAO subsequently expressed more doubts and concerns, questioning in a May, 1994, report whether asserted gains in labor efficiency over the previous five years, ascribed by the USPS to automation, should instead be credited to other factors like mailer worksharing in other categories of mail.[23] In February, 1995, testimony summarizing the findings of yet another GAO report,[24] its representative testified:

> This week we reported that automating mail processing and achieving savings have been more difficult to accomplish than anticipated. The obstacles range from equipment not having as much capability as expected to management being unable to gain employee cooperation in changing work methods affected by automation. The Service has not been able to achieve the personnel reductions that were once projected, and any financial savings have been small relative to total operating costs.[25]

In a subsequent hearing before the same subcommittee, the Chairman of the Postal Rate Commission noted:

> [I]ntervenors and the Commission have become concerned about the quality and quantity of information presented by the Service. In the first section of the R94-1 Opinion we stated "[t]he Commission is concerned that data deficiencies in the Postal Service filing reflect a reduced commitment to the task of developing and providing reliable data for parties in Commission proceedings." We noted that these deficiencies ". . . have been emphasized by many of the parties to this proceeding." Deficiencies ranged from the virtual absence of special studies to reflect changes in operation since the last proceeding four years ago, to serious overstatement of the costs of second class in-county (used primarily by small newspapers) and business reply service. Questions were also raised by the parties regarding the adequacy of current cost systems in light of the significant changes in Postal Service operations in recent years and the reduction of resources devoted to data collection analysis efforts.[26]

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[23] *Postal Service Role in a Competitive Communications Environment*, 12, 13 (GAO/T-66D-94-162) (May 24, 1994).

[24] *Postal Service: Automation Is Taking Longer and Producing Less Than Expected* (GAO/GGD-95-89BR) (February 22, 1995).

[25] *General Oversight of the U.S. Postal Service*: Hearings before the Subcomm. on the Postal Service of the House Comm. On Government Reform and Oversight, 104th Cong., 1st Sess. 54, 55 (1995) (Statement of Michael E. Motley, Associate Director, Government Business Operations Issues, General Government Division, U.S. General Accounting Office).

[26] Id. at 81 (Statement of Edward J. Gleiman, Chairman, Postal Rate Commission).

F. Efforts to Focus USPS on the Problem

The Postal Service admits it has not made any meaningful effort to study these problem although "[a]n internal, operations review of Regular Periodicals is planned."[27] Nevertheless, the Periodicals industry continues its efforts to obtain USPS recognition that there is a problem and take steps to address it. Late in 1996, we raised the issue with senior Postal Service managers at a series of meetings. We noted that costs reported for Periodicals had escalated very quickly in the period from fiscal year 1993 to fiscal year 1995; we also voiced our concern about the continuing trend in fiscal year 1996 (a concern that ultimately proved justified).

In March of this year, witness Stralberg and I gave a presentation to USPS managers at Postal Service headquarters. Yet again, we documented the unexplained and excessive increases in Periodicals mail processing costs and explained why the Postal Service's mixed-mail and overhead distribution assumptions have led to anomalous results. Defensive USPS managers again raised the so-called "transfer-hub theory," despite the fact that this "theory" had been discredited both previous times they raised it.

In May of this year, at the Postal Forum, other representatives of the Periodicals industry and I met with senior Postal Service officials to discuss the problem. At that meeting, the Postal Service announced its intention to conduct a study of Periodicals costs and asked industry to participate in the study. We readily agreed. Soon thereafter, to ensure that the Postal Service understood the importance of the problem, several industry leaders, including witness Crain, asked to meet with the Postmaster General. That meeting, described by witness Crain, took place on June 4 of this year.[28]

While that meeting was disappointing in a number of respects, the Postal Service did renew its commitment to conduct a joint industry-USPS study to determine how flat processing costs can be reduced. Unfortunately, the scope and methodology of the study are still to be decided, and data collection must await completion of the rate case. However, I am hopeful that the study will fully

[27] Tr. 19B/8822.
[28] ABP-T-1 at 2.

examine all the issues. Meanwhile, however, the Periodicals industry continues to be saddled with the problem of these puzzling trends in mail processing costs.

G. The Continuing Periodicals Cost Problem

The Postal Service's presentation in this docket demonstrates that the "automation refugee" problem still exists. There are several disturbing illustrations of this. First, mixed-mail and overhead costs continue to increase at a faster rate than direct costs. In fiscal year 1996, the base year in this docket, direct tallies represented less than 50 percent of mail processing costs[29], down even from fiscal year 1993's already low levels. In 1986, by comparison, direct tallies represented 70 percent of total mail processing costs. The percentage of costs represented by direct tallies would be slightly lower yet if the Postal Service had not in recent years converted a portion of mixed-mail tallies into direct tallies by "counting" the contents of some mixed-mail items and expanding the use of the top-piece rule.[30]

The increasing cost trend is particularly significant for overhead costs. In his Docket No. R90-1 testimony, witness Stralberg expressed alarm that overhead costs in fiscal year 1989 had grown to 23 percent of direct and mixed-mail costs.[31] From fiscal year 1989 to 1996, traditionally-defined overhead costs (breaks/personal needs, clocking in/out and moving empty equipment) increased 8.5 percentage points, to 31.5 percent of direct and mixed-mail costs.[32] As defined by witness Degen, the category of not-handling costs, which includes all costs for tallies where the observed employee was not handling a piece of mail, item, or container, has grown to represent over 42 percent of all mail processing costs.[33]

Second, MODS information presented by witness Degen and summarized in Table 1 shows that the percentage of time spent not-handling mail is at least as large at manual operations as at automated operations.

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[29] Fiscal Year 1996 LIOCATT.

[30] Counting the contents of some mixed-mail items began in fiscal year 1993, the Base Year in Docket No. R94-1; See Docket No. MC97-2, USPS-T5 at 10-11(witness Patelunas) about Top-Piece Rule.

[31] Docket No. R-90-1, Tr. 25/11842 (witness Stralberg).

[32] Cost Segments and Components, 1996.

[33] Calculated from USPS-LR-H-23.

Table 1

Percentage of Time Spent Not Handling Mail

Operation Type[34]	Not Handling%[35]
Automated	35%
Mechanized	33%
Manual	33%
Allied	53%
Other	67%
Function 4	56%
All	**42%**

This phenomenon contradicts witness Barker's testimony in Docket No. R94-1, when he argued that the large increase in not-handling and break time in fiscal year 1993 was not a problem since employees at automated operations are often tending the machines instead of touching the mail.[36] Furthermore, the percentage of not-handling costs is much higher at some types of manual operations such as platforms and opening units. Not-handling time is close to 50 percent of total employee time at opening units and more than 60 percent at platforms.[37] This is a clear indication of the phenomenon GAO identified – workhours (represented by tallies) replaced by automation not being put to effective use elsewhere. It is interesting that these very high levels of not-handling costs occur at operations where productivity is not measured.

Third, data provided by witness Degen show that, for some item types, employees spend almost as much time handling empty items as handling items containing mail. For example, the costs of handling green sacks and small parcel trays when empty are as high as the costs of handling these items when they

[34] Operation type identified in USPS-T12 at 15; Allied, Other, & Function 4 operations are primarily manual operations.

[35] Calculated from USPS-LR-H-23.

[36] Docket No. R94-1, Tr. 3/1237-39 (witness Barker).

[37] Calculated from USPS-LR-H-23.

contain mail.[38] This result is counterintuitive and suggests that employees do not always have productive work to keep them occupied.

Fourth, MODS data contained in witness Bradley's testimony show declining productivity at many operations, including all manual operations except parcel sorting. Table 2 shows the percentage change in productivity in MODS operations since 1988.[39]

Table 2. Percentage Change in Productivity Between FY 1988 and FY 1996[40]

Operation	Percent Change
Optical Character Reader	(38%)
Barcode Sorter	2%
Letter Sorting Machine	(21%)
Manual Letter Sorting	(10%)
Manual Flat Sorting	(6%)
Flat Sorting Machine	(18%)
Manual Parcel Sorting	45%
Mechanical Parcel Sorting	60%
Small Parcel and Bundle Sorter (Non-Priority)	37%
Manual Priority Mail Sorting	(6%)
Small Parcel and Bundle Sorter (Priority)	5%
Mail Cancellation/Preparation	9%

For example, manual letter sorting productivity decreased 10 percent from 1988 to 1996 and manual flat sorting decreased 6 percent.[41] While a decline in some automated operations may occur as USPS handles additional more difficult to handle volume on automated equipment, the pervasiveness of the declines and the fact that even manual sortation is affected suggests a systemic problem.

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[38] Tr. 12/6216; DMA/USPS-T12-14.

[39] For operations with no fiscal year 1988 data, the change in productivity is based on the change from fiscal year 1989 to fiscal year 1996.

[40] Calculated from USPS-LR-H-148.

[41] Tr. 11/5565 (Exh. TW-XE-2).

Finally, witness Degen's calculations identify $685 million in costs for clerks and mailhandlers who are clocked in to mail processing operations but are doing "administrative activities." While witness Degen treats these costs as mail processing costs and suggests that these administrative costs "relate" to mail processing activities, this large pool of "administrative" undefined costs likely includes costs for employees not productively employed.[42]

IV. THE POSTAL SERVICE'S PROPOSAL SIMULTANEOUSLY INCREASES CONFIDENCE IN ATTRIBUTION AND DECREASES CONFIDENCE IN DISTRIBUTION

Witness Degen testifies that the Commission and intervenors have criticized the Postal Service's treatment of mail processing costs in past cases in three areas: (1) the dramatic increase in not-handling tallies; (2) accuracy of mixed mail distribution procedures; and (3) the distribution of all mail processing direct labor and overhead (not-handling) costs on the assumption that these costs are 100 percent volume variable. Witness Degen maintains that the new methodology he and witness Bradley present was developed to respond to these criticisms and that the revisions squarely address each of the past criticisms and yield more accurate estimates of attributable cost.[43]

In fact, it is wrong to view the testimonies of witnesses Bradley and Degen as jointly responsive to these past criticisms; the two witnesses undertake fundamentally different analyses. Witness Bradley examines and analyzes the attribution of mail processing costs while witness Degen independently develops a distribution of these costs. In terms of the three criticisms of the Postal Service's treatment of mail processing costs, Bradley and Degen address and attempt to respond to different criticisms.

Witness Bradley alone addresses the third criticism, namely the long-standing assumption that mail processing direct labor and overhead costs are 100 percent volume variable. He has presented a state-of-the-art econometric

[42] Tr. 12/6590-95.
[43] USPS-T-12 at 5.

variability analysis that demonstrates the inaccuracy of this assumption. Bradley utilizes a sophisticated approach with an unusually rich panel data set that captures both the cross-sectional variation in the productivity relationship among individual facilities, as well as the time-varying component. His analysis applies a *fixed-effects model to control for individual office effects, while simultaneously* correcting for the biasing effects of serial correlation. Bradley quantifies variability coefficients for 25 separate groupings of operations (which witness Degen then applies directly or by analogy to 46 cost pools).[44]

Witness Bradley was meticulous in his approach, performing numerous analytical and diagnostic calculations. His functional form is flexible. This, as witness Shew points out, provides "suppleness" and "allows the curve relating cost and output to take on almost any shape, as dictated by the data."[45] Witness Shew explains that some of the more common functional forms may not fit the data as well for observations far from the mean.[46]

There are several objective measures that support the results obtained by witness Bradley. First, it is clear that there are certain mail processing functions where the time needed to perform the function doesn't depend on the volume processed. As witness Bradley testifies:

> Certain functions, like setting up mail processing equipment or tying down a manual case are done for each sorting scheme and are not sensitive to the amount of volume sorted...the existence of these relatively fixed functions in an activity will cause the activity's variability to be less than one hundred percent.[47]

Witness Moden also describes functions that are not fully volume variable:

> Most activities have some associated work such as obtaining mail, positioning rolling stock, or changing schemes that does not change proportionately with changes in volume, but is driven more by the operating schedule for the activity.[48]

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[44] USPS-T-14 at 8; USPS-T-12 at 15.
[45] Dow Jones-T-1 at 18 .
[46] Ibid.
[47] USPS-T-14 at 55, 56.
[48] USPS-T-4 at 19.

Second, witness Bradley's results are consistent with the notion that worker productivity should improve when volume increases, leading to volume variability less than 100 percent. Witness Moden describes this phenomenon:

> In human-paced operations such as manual sorting, experience suggests that people work faster when there is a steady inventory of mail waiting to be processed. As volume increases, it is easier to maintain such an inventory.[49]

Witness Bradley describes a related efficiency effect, namely that workers get more efficient at specialized tasks when they perform such tasks with regularity:

> [A] large volume permits dedication of the same workers to an activity on a regular basis. This regularity increases their familiarity with the activity and, as a result, their efficiency.[50]

I conclude, therefore, that witness Bradley's analysis does in fact squarely address and respond to the third IOCS criticism identified by witness Degen, i.e., the assumption that mail processing costs are 100 percent volume variable. Unfortunately, with respect to the first area of criticism, the increase in not-handling tallies, neither witness provides an explanation or justification. While witness Bradley's results allow for the appropriate treatment of a portion of these tally costs as institutional, his testimony does not analyze why not-handling costs have increased so much in recent years. Nor does he suggest how to distribute to classes and subclasses of mail the large pool of not-handling costs that he categorizes as volume variable.

That task falls to witness Degen, who attempts to address the first criticism as it relates to the distribution of increased not-handling costs as well as the second criticism, concerning the appropriateness of existing mixed-mail distribution procedures. Witness Degen states that his revised approach is a "considerable refinement" of the existing mixed-mail methodology, citing his use of item types and information on container contents. He also cites as a refinement

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[49] Ibid.
[50] USPS-T-14 at 56.

his confining of mixed-mail distributions to direct tallies associated with the same cost pool, a procedure he also uses for the not-handling tallies.[51]

As I will show below, while witness Degen believes he has responded to the past criticisms on the growth in not-handling costs and distribution of mixed-mail costs, he has not answered legitimate questions raised in past cases, nor has he arrived at an accurate distribution of mail processing costs.

A. Witness Degen's new mail processing cost distribution

MPA exhibit Exh. MPA-2A presents a complete comparison of the IOCS/LIOCATT cost distribution procedures used previously and the "new" Degen methods for distributing mail processing costs to subclasses and special services. There are separate distribution methodologies for the three categories of costs – direct, mixed-mail, and not-handling. These three categories have further breakdowns that determine the specific distribution used in LIOCATT or proposed by Degen. Table 3 provides definitions for each type of tally category.

Table 3

Direct tallies
• **Piece handling - clerk/mailhandler is handling an individual piece of mail.**
• ***Identical item or container - clerk/mailhandler is handling an item or container filled with identical mail in terms of mail origin, mail class, subclass, shape, size, weight, and postage.***
• **Items include bundles; flat, letter, and small parcel trays; pallets; various color and purpose sacks; con-cons; and "other" items.**

[51] USPS-T-12 at 5-10.

- Containers include wheeled equipment, such as hampers, nutting trucks, utility carts, BMC-Over The Road containers, and General Purpose Containers, as well as multiple items not in a container.

- Top-piece rule item - clerk/mailhandler is handling a bundle or tray of nonidentical mail and tally-taker records information on the top piece in the bundle or tray. (Note that some of these tallies used to be part of mixed-mail).
- Counted item - clerk/mailhandler is handling an item with nonidentical mail and tally-taker counts the pieces in the item by subclass. (Note that these tallies used to be part of mixed-mail).

Mixed-mail tallies

- Uncounted item - clerk/mailhandler is handling an item with nonidentical mail and tally-taker does not count the pieces.
- Identified container - clerk/mailhandler is handling a container of nonidentical mail and tally-taker identifies the percentage of filled volume represented by various items and loose shapes in the container.
- Unidentified container - clerk/mailhandler is handling a container of nonidentical mail and tally-taker does not identify the contents of the container.
- Empty items or container - clerk/mailhandler is handling an item or container that does not contain any mail.

Not-handling tallies - clerk/mailhandler is not handling a piece of mail, an item, or container

- **Not-handling - clerk/mailhandler is at an operation *but is not handling mail, items or containers.***
- **Breaks - clerk/mailhandler is on break from an operation.**
- **Clocking in/out - clerk/mailhandler is leaving one operation and going to another.**
- **Empty Equipment - clerk/mailhandler is performing some activity relating to empty equipment but is not handling an empty item or container.**
- **Window service.**
- **Administration support.**

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1. *Degen's mixed-mail distribution*

The changes witness Degen proposes affect the mixed-mail and not-handling categories of costs. For mixed-mail tallies, Degen distributes the uncounted items, empty items and items in identified containers to classes and subclasses in proportion to direct item tallies (identical, top-piece rule, and counted). Loose mail in identified containers is distributed based on direct piece handlings of mail of the same shape. Degen then distributes unidentified and empty container costs to subclass in proportion to identical and identified container costs. Separate distribution keys, generally, are developed for each MODS cost pool, type of item or shape of loose mail, and container type.

The Postal Service considered, but rejected, distributing uncounted item costs on counted item costs in Docket No. R94-1; the Commission concurred with that decision.[52] The Postal Service and Commission similarly declined in that

[52] PRC Op. R94-1, para 3059.

docket to use information on the contents of identified containers, viewing the value of the information as questionable.[53] Despite the record of Docket No. R94-1, witness Degen uses both the counted items and identified containers to distribute costs of uncounted items and unidentified containers. He then further *disaggregates the distribution by cost pool and item type.*

Implicit in Degen's distribution methodology are three assumptions:

- *direct items, which include counted items, are representative of* uncounted and empty items for specific item types and cost pools;
- *direct items, which include counted items, and direct piece* handlings for mail not in containers are representative of items and loose shapes in containers; and
- classes and subclasses contained in identical and identified containers are representative of mail contained in unidentified and empty containers of specific container types and cost pool.

2. Degen's not-handling costs distribution

For not-handling tallies, which under LIOCATT are distributed in proportion to all direct and mixed-mail costs, Degen generally distributes costs to subclasses and special services in proportion to the distribution of all other mail processing costs within the same cost pool. Implicit in this distribution methodology are two assumptions:

- direct and mixed mail in a cost pool cause the not-handling costs in the cost pool; and
- not-handling costs should be distributed within cost pool even if an employee was actually working somewhere else.

[53] Docket No. R94-1, Tr. 3/1157-59 (witness Barker).

B. Fundamental flaws in witness Degen's distribution methodology assumption

There is a significant problem with the assumptions implicit in witness Degen's methodology. They are totally untested and sometimes plainly wrong.

During oral cross examination, witness Degen confirmed that he used numerous assumptions to distribute mixed-mail and not-handling mail costs among classes and subclasses.[54] He also acknowledged that "[t]he assumptions that go into an analysis are important."[55] Yet Degen conceded that he did not perform any studies to test any of these assumptions upon which his distributions of mixed-mail and not-handling costs depend.[56] Witness Degen also admitted that "all activities of an employee clocked into a mail processing MODS operation are counted as part of that mail processing operation, even if the data collector observed the employee working somewhere else."[57] Finally, witness Degen acknowledged that he did not perform any studies to attempt to determine if the costs his methodology distributes are causally related to the various subclasses of mail, stating that "[i]f I knew a way to do it, I would have proposed it by now."[58]

While witness Degen was fairly forthcoming during oral cross-examination regarding his extensive use of assumptions to distribute mixed-mail and not-handling costs, his direct testimony did not adequately convey the extent of his reliance on untested assumptions. Witness Shew discusses the importance of assumptions and the dangers of relying on untested ones.[59]

That is certainly the case with regard to Witness Degen's untested assumptions. Over 50% of mail processing costs are distributed on the basis of Degen's untested assumptions, undoubtably establishing a dominant effect on the final results.

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[54] Tr. 12/6660-6664 (witness Degen).

[55] Id. at 6665 (witness Degen).

[56] Id. at 6666 (witness Degen).

[57] Id. at 6665-66 (witness Degen); USPS-T-12 at 6,7.

[58] Id. at 6666 (witness Degen).

[59] Dow Jones-T-1 at 21-27.

Not only are witness Degen's assumptions untested. There are also many indications that his assumptions are incorrect. In the discussion that follows I describe significant problems with two major assumption-based methodologies employed by witness Degen: (1) the use of subclass proxy assumptions in the distribution of mixed-mail costs and (2) the distribution of mixed-mail and not-handling tallies almost exclusively within cost pools.[60]

1. Subclass proxy assumptions

Witness Degen proposes to use information on counted items and identified containers to distribute other mixed-mail costs despite the Commission's rejection of the use of this data for distribution purposes in Docket No. R94-1. Unfortunately, witness Degen's use of counted item information to distribute mixed-mail costs still suffers from some of the same problems that witness Stralberg and I identified in that docket.

As was the case in Docket No. R94-1, counting the contents of items continues to fall short of Postal Service expectations and leads to troubling questions. As I stated in Docket No. R94-1:

> When the Postal Service personnel modified IOCS procedures to count mixed mail, they intended and expected that all mixed mail items would be counted. But that did not happen. In fact, only 27 percent of the mixed mail sample was ever counted. USPS witness Barker had no explanation for the failure of data collectors to count 73 percent of mixed mail items.[61]

This problem still exists. Despite the fact that the IOCS Handbook states that *all items with mixed mail should be counted*, witness Degen identifies about $60 million in counted item tally costs and $91 million in uncounted item tally costs.[62] Even after three years of experience counting mixed items, IOCS data collectors manage to count only about 38 percent of eligible item costs.

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[60] *The only exceptions are when distribution cells are empty and for platform, miscellaneous, mail* processing support, empty equipment, and LDC 48 operations. See USPS-LR-146.

[61] Docket No. R94-1,Tr. 26A/12355-6 (witness Cohen) (emphasis in original).

[62] Tr. 12/6216; Tr. 12/6164 (witness Degen).

In Docket No. R94-1, I suggested that data collectors tended to count items with fewer pieces. I stated that "[i]f, for example, data collectors encountered some sacks with many pieces and some sacks with few pieces, they might have only counted the sacks with fewer pieces."[63] Data in this case demonstrate that the tendency to count items with few pieces still exists. Twenty-one percent of counted item costs are distributed to Priority Mail and another 12 percent to Periodicals, much more than would be expected if the selection of items to count were truly random. Conversely, First-Class Mail only receives 14 percent of counted item costs, much less than would be expected if the likelihood of an item being counted were random.[64] Brown sacks, which are normally used for Periodicals, were counted 70 percent of the time. Other sack types had substantially lower counting rates.[65]

Witness Degen apparently believes that differing counting percentages are not a problem since "most of the items have a significant association with shapes or classes of mail", and he distributes mixed mail costs within item types.[66] Degen is wrong. An item does not always contain the subclasses or classes of mail "associated" with that item as Table 4 shows.

Table 4.

Proportion of Direct Tally Costs

Where Sacks Were Used for Associated Class[67]

Sack Color or Type	Associated Class	Associated Class (%)
Blue and Orange	Express	76
Brown	Periodicals	72
Green	First-Class	73
International	International	90
Orange and Yellow	Priority	86
White	Standard A	63

[63] Docket No. R94-1, Tr. 26A/12365 (witness Cohen).
[64] Tr. 12/6160-64 (witness Degen).
[65] Tr. 12/6216; DMA/USPS-T12-14.
[66] Tr. 12/6580.
[67] Tr. 12/6580; DMA/USPS-T12-15(c).

For example, while Degen states that brown sacks are associated with Periodicals almost one-third of the direct costs for brown sacks are for classes other than Periodicals. Similarly, almost 40 percent of direct costs for white sacks, which Degen says are associated with Standard A mail, are for classes other than Standard A.[68]

The discussion thus far demonstrates the problems with using counted items to distribute mixed-mail costs. Unfortunately, there is also a problem with using identical items to distribute mixed-mail costs. Witness Stralberg demonstrates in his testimony not only that the counted item data are unsuitable for distributing uncounted mixed item costs, but also that the direct item data, and the combination of direct and counted item data are even more unsuitable. As he explains, identical items, particularly sacks and pallets, are generally prepared by bulk mailers, not the Postal Service. In fact, more than 80 percent of the costs from direct non-top piece rule items are either Standard A or Periodicals. These data are not at all suitable for distributing mixed item costs, which include costs associated with collection mail and other mail packaged by the Postal Service rather than mailers.[69]

Witness Degen's distribution keys for containers suffer from the same problem. IOCS tallies for identified containers estimate the proportion of different types of items and shapes of loose mail in the container. Tallies for direct and counted items and loose mail in that cost pool are then used to distribute the identified container costs which in turn are used to distribute unidentified and empty container costs to subclasses. However, the composition of mail in containers is likely to be different from the composition of items and loose mail not in containers. Witness Stralberg provides an example of this mismatch, describing how Periodicals are frequently handled individually at sorting operations but are very unlikely to be found loose in containers, since putting loose Periodicals in a container would destroy their presortation.[70]

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[68] Tr. 12/6216; DMA/USPS-T12-15(c).
[69] DMA/USPS-T12-19.
[70] TW-T-1.

Witness Degen has no basis for assuming that loose mail out of containers is representative of loose mail in containers, or that items out of containers are representative of items within containers.

2. Distribution within cost pools

Even more troubling than witness Degen's unsupported subclass proxy assumptions is his decision to confine his mixed-mail and not-handling distributions to tallies within cost pools. Witness Degen apparently believes that consistency with witness Bradley dictates distribution within cost pools.[71] I disagree. The only output of witness Bradley's analysis that constrains witness Degen is the variability of costs within a cost pool. As long as witness Degen applies the correct variability percentage to each tally, he is free to distribute costs to classes and subclasses across cost pools. He even does so when he deems it appropriate – when distribution cells are empty and in several other cases. Degen's proposed distribution, not required or implied by witness Bradley's cost pool variabilities, severely exacerbates the mail processing cost distribution problem.

Witness Degen states that his main concern in the new methodology is "identifying the activities actually performed by the employees clocked into the operations in a cost pool in order to ensure an accurate distribution of those costs."[72] However, more than 40 percent of mail processing costs are represented by "not-handling" tallies. For many of these tallies, witness Degen really knows only what employees are not doing, rather than what they are doing.[73]

What is known is that not-handling tallies are a large percentage of total tallies at manual operations, such as opening units and platforms. These operations should have lower not-handling percentages than automated operations.[74] Table 5 suggests that the high percentage of not-handling time

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[71] Tr. 12/6154 (witness Degen).

[72] USPS-T-12 at 7.

[73] For some tallies, witness Degen does know what an employee is doing, but he chooses to ignore that information if it is inconsistent with the cost pool the employee is clocked into. See part V, below.

[74] Docket No. R94-1, Tr. 3/1237-39 (witness Barker).

results from postal supervisors reassigning temporarily idle employees from sorting operations to allied and other operations where productivity is not measured.

Table 5

Percentage of Time Spent
Not Handling Mail at MODS Facilities[75]

Cost Pool Type	Not Handling %
Productivity measured[76]	34%
Productivity not measured	57%

Employees must be clocked in to an operation in order to be paid. There is, therefore, an incentive for supervisors to send employees to clock in at operations where piece handlings are not measured, such as opening units. Not-handling tallies in such operations will not decrease "measured" productivity as they would in an operation where both labor hours and piece handlings are collected.

Distribution of not-handling costs within cost pools penalizes the mail at operations with high not-handling ratios. For classes with a large share of the direct costs at these allied and other operations, such as Periodicals, witness Degen's distribution method overstates such classes' shares of not-handling costs.

There are also problems with witness Degen's distribution of mixed-mail costs within cost pools. A very large portion of mixed-mail costs, over $700 million, represents handling empty items and containers. Witness Degen has no data from which to determine what subclasses of mail were contained in these

[75] Calculated from USPS-LR-H-23; USPS-LR-H-148.
[76] MODS operations with productivity information are those in Exh. TW-XE-2, Tr. 11/5565.

items when they were not empty or at which cost pool(s) that mail was processed before the items were emptied. The remaining mixed-mail costs, another $700 million, represent mixed-mail items and containers with mail in them.[77] As described by witness Stralberg, mail that may be loose in containers at opening units will be handled individually at piece sorting operations. Degen would distribute the container costs only on direct costs at the opening unit when in fact the correct distribution should be in proportion to piece tallies across all sorting operations.[78]

An additional problem with witness Degen's distribution within cost pools results from Degen's insistence on distributing costs within the cost pool where an employee is clocked, even if clerk or mailhandler is actually working someplace else. In such cases, Degen's method distributes the mixed or not-handling tally on the basis of direct tallies that bear no relation to the work the employee is performing.

C. Statistical Deficiencies in Witness Degen's Distribution Methodology

Even if the problems described above did not invalidate witness Degen's methodology, his decision to distribute costs both by item type and within cost pool lead to statistically inappropriate distribution keys. The small number of tallies for which counting is accomplished, the large number of item types and loose shapes (21) and container types (10) and the extensive number of cost pools (49 including non-MODS disaggregated by basic-function and excluding LDC 15 for which IOCS has no subclass data) combine to create a serious problem with data thinness. I described this problem in Docket No. R94-1 as well, explaining that "there is simply not enough data in the counted mixed- mail sample to support .... distribution".[79]

Witness Degen has a potential of 784 distribution keys for mixed items, 1029 for items and loose mail in identified containers and 490 for unidentified and empty containers. One hundred thirty eight of the distribution keys for mixed items

[77] DMA/USPS-T12-15, 16.
[78] TW-T-1.
[79] Docket No. R94-1, Tr. 26A/12365 (witness Cohen).

and identified containers had no direct items on which to do the distribution.[80] Witness Degen, unable to distribute costs if a cell is empty, distributes across cost pools when this happens. However, he does not distribute across cost pools when he has only a few tallies on which to do his distribution, and as I testified in Docket No. R94-1, "[G]enerally accepted statistical practices dictate that there should be *at least* five observations .... to represent adequately a distribution."[81] In total, there are 192 distribution keys where witness Degen has fewer than 5 tallies with which to do his distribution of mixed item and identified container costs and 105 keys for distributing unidentified and empty container costs.[82]

Not surprisingly, statistical analysis of witness Degen's distribution keys shows the unreliability of the data and the uncertainty of his results. Degen provides coefficients of variation by cost pool, item type, and subclass.[83] A large coefficient of variation indicates that there is substantial uncertainty in the cost estimates, and estimates with large coefficients of variation should not be used as the basis for distribution keys.

I examined the coefficients of variation that form the basis for witness Degen's distribution keys and found that almost 70 percent of the costs by subclass, item type, and cost pool have coefficients of variation of at least 50 percent. For this 70 percent, it is impossible to conclude (at the 95 percent confidence level) that the cost is significantly different from zero.

As described below, witness Stralberg and I suggest using distribution keys that are more aggregated, and therefore more statistically reliable, than those proposed by witness Degen.

V. AN IMPROVED MAIL PROCESSING COST DISTRIBUTION — TWO ALTERNATIVES

In conjunction with witness Stralberg, I present two alternatives for addressing the shortcomings of witness Degen's methodology. First, I suggest an

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[80] DMA/USPS-T12-15(b).

[81] Docket No. R94-1, Tr. 26A/12365 (witness Cohen) (emphasis added).

[82] DMA/USPS-T12-15, 16.

[83] DMA/USPS-T-12-15(c).

alternative distribution methodology. Second, I point out that the Commission has sufficient authority and reason to treat at least a portion of the not-handling costs as institutional costs.

Witness Degen's methodology yields a fundamentally flawed distribution of clerk and mailhandler costs. As described above, his proposed distribution of mixed-mail and not-handling costs suffers from the following critical flaws: (1) testable yet untested assumptions; (2) inadequate data for statistically reliable results; (3) some demonstrably erroneous outcomes; and (4) frequently counter-intuitive results.

The Postal Reorganization Act provides that "*[p]ostal rates and fees shall be reasonable and equitable* and sufficient to enable the Postal Service under honest, efficient, and equitable management to maintain and continue the development of postal services of the kind and quality adapted to the needs of the United States."[84] As witness Stralberg, Shew, and I have demonstrated, witness Degen's proposed distributions of mail processing costs is neither reasonable nor equitable. Thus, rates and fees based on this proposed distribution could be neither reasonable nor equitable.

A. A More Reasonable and Equitable Distribution

Witness Stralberg has developed, and I support, an alternative cost distribution for clerk and mailhandler costs. This alternative is based on three fundamental principles:

1. The distribution methodology should avoid unsupported assumptions to the greatest extent possible;
2. Distribution procedures should use all verifiable and relevant data collected in IOCS upon which reasonable inferences of causation can be based; and
3. Pending the development of more complete information, cost distributions should generally be done as they have in the past since there is currently no better alternative.

[84] 39 U.S.C. 3621 (emphasis added).

Witness Stralberg and I do not distribute costs within cost pools. This not only mitigates the data thinness problem, but also avoids the incorrect assumption that mixed-mail and not-handling costs are caused by and relate to direct costs in a particular cost pool. In light of the Postal Service's ability to move employees freely and quickly between operations, the fact that not-handling tallies are clustered at operations where productivity is not measured, the need to match mail in items and containers with individually handled pieces at different operations, and the fact that employees may work in operations other than those into which they are clocked,[85] it is clear that mixed-mail and not-handling tallies may not be caused by direct activities in the same cost pool.

In place of the cost pools, witness Stralberg and I generally distribute costs by CAG and basic function.[86] As described by Stralberg, this distribution methodology avoids issues related to why an employee is at a particular operation. Employees generally do not move across CAGs, as they are assigned to only one facility. Replacing cost pool distribution keys with keys based on basic function has two important benefits – (1) not-handling costs for which we have no information as to causation are distributed more broadly to classes and subclasses in proportion to the entire workload during a work shift (basic function loosely corresponds to work tours); and (2) spreading the distributions over cost pools increases the depth of information available with which to do the distributions and avoids a great deal of witness Degen's data thinness problem.[87]

Witness Stralberg has examined the tallies carefully and determined that there is information that witness Degen ignored that can be used to improve the distribution of costs to classes and subclasses. For example, witness Degen ignored the mixed shapes information (Activity Codes 5610, 5620, and 5650 and 5700) described in Docket No. R94-1 and available again in this case. Witness Degen's distribution allocates some mixed letters tallies to flats and parcel mail, some mixed flats tallies to letter and parcel mail, and some mixed parcels tallies to letters and flats. Witness Stralberg and I recommend an improved distribution,

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[85] See USPS-T-12 at 6, 7.

[86] Basic function is not always defined for certain activity codes.

[87] TW-T-1.

using the information on shape to limit the distribution to direct tallies of that shape mail.[88]

Similarly, witness Degen's distribution uses the information on what MODS operation an employee is clocked into, even when it is contradicted by information from the IOCS record about what the employee is really doing. For example, an employee may be clocked into a flats manual operation but be working at a window performing window service activities. Witness Degen would distribute this tally cost to flats mail. Witness Stralberg and I would distribute the costs more appropriately, using window service cost distribution procedures.

MPA exhibit Exh. MPA-2B presents the distribution methodology I propose for each category of mixed-mail and not-handling tallies. To summarize:

- *for mixed-mail costs, I propose that these costs be distributed in* proportion to direct mail costs, disaggregated by CAG and basic function. This is the procedure used by the Commission in previous dockets. Also, as in R94-1, I propose distributing shape-related mixed-tallies in proportion to direct costs for those shapes within CAG and basic function.
- for not-handling costs, using IOCS tally information, I propose that not-handling tallies involving window service or administrative activities be distributed on the customary distribution keys for individual activities in these cost components; that not-handling tallies with shape information be distributed in proportion to direct tallies of that shape; that not-handling tallies in special delivery, registry, and Express Mail units be distributed to those services and that class; and that not-handling tallies for specific activities like central mail markup only be distributed to direct mixed tallies for the same activity. As with mixed-mail, these distributions, and distribution of the remaining pool of not-handling costs, should be disaggregated by CAG and basic function. This is

[88] TW-T-1.

consistent with the procedure used by the Commission in previous dockets.[89]

I have modified witness Degen's distribution procedures as contained in USPS-LR-H-146 to reflect my proposed methodology. MPA Exhibit Exh. MPA-2C presents my proposed distribution of clerk and mailhandler costs to classes and subclasses, with individual columns for mail processing, window service and administrative costs. MPA Exhibit Exh. MPA-2D presents a summary comparison of my proposed clerk and mailhandler cost distribution with that of witness Degen. Full documentation of my procedures and SAS run outputs is provided in MPA-LR-1.[90]

B. *Treat a Portion of Volume-Variable Mixed-Mail and Not-Handling* Costs as Institutional

In Docket No. R94-1, witness Stralberg suggested that mail-processing overhead costs might best be treated as institutional costs. He reasoned that not only had the Postal Service failed to explain why overhead costs were increasing so dramatically, but that the Service also had no basis on which to distribute the vastly increased overhead costs to classes and subclasses of mail.[91]

In his testimony in this docket, witness Stralberg once again suggests that overhead or, in this case, not-handling costs might appropriately be treated as institutional costs since the Postal Service still has neither explained why not-handling costs continue to grow at such an alarming rate nor found a suitable basis for distributing these costs to classes and subclasses of mail.

As discussed above, finally in this docket, the Postal Service agrees that some mail processing costs are institutional costs. Based on witness Bradley's analysis, almost a quarter of all mail processing costs (direct, mixed-mail, and not-handling) are treated as institutional. Witness Stralberg suggests that the

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[89] TW-T-1.

[90] Witness Stralberg completed his calculations for our cost distribution before I completed the SAS runs, which corroborate his results. In the interest of time, I have used his results for Clerks and Mailhandlers cost in Exhibits MPA-2C and -2D.

[91] Docket No. R94-1, Tr. 25/11858 (witness Stralberg).

remaining volume-variable not-handling costs ($2.7 billion) should also be treated as institutional costs rather than attributed arbitrarily to classes and subclasses.

While hopeful that witness Bradley's analysis will open the door to treating some mail processing costs as institutional, both witness Stralberg and I recognize that the Commission has been hesitant in the past to take this step. Fearful that the Commission might hesitate once again to treat all not-handling costs as institutional and dismayed that witness Degen's proposed distribution is even less suitable than the distribution used in previous cases, Witness Stralberg and I have proposed an alternative distribution of mixed-mail and not-handling costs that is more reasonable and equitable than witness Degen's. However, neither witness Stralberg nor I maintain that our alternative distribution is a perfect solution; it is simply the best available distribution methodology in this case if the Commission concludes it must attribute these costs.

There are two reasons why the Commission should consider treating some volume-variable mail processing costs as institutional. First, for mixed- and not-handling tallies, there is very limited information available to establish a causal link between these costs and individual classes or subclasses of mail. Second, if mail processing costs are inflated due to inefficiency in mail processing operations, no class or subclass of mail should be held responsible for the portion of these costs resulting from this inefficiency. Even witness Degen agrees that if costs are incurred because of inefficiency, they could be classified as *institutional, because they have nothing to do with the amount of mail being* processed.[92]

On oral cross examination, witness Degen was asked to hypothetically, "...assume that an employee's work was eliminated when automation equipment was purchased. Further assume that for whatever reason he is still on the Postal Service payroll... Now assume that management instructs [that employee] to clock into manual flats processing but they already have enough employees to do that work. Assume further that his labor input lowers productivity for that operation.

[92] Tr. 12/6658 (witness Degen).

Could a rational costing system assign his salary and benefits to institutional costs?" Witness Degen replied, "Yes."[93]

In addition to the evidence of inefficiency I presented earlier in my testimony, a 1990 study sponsored by the Commission further suggested that the hypothetical to which witness Degen responded is a reality at many postal facilities.[94] The productivity study found, "virtually all improvement in TFP [Total Factor Productivity]... came during periods of hiring freezes."[95] In other words, in the absence of a hiring freeze, the Postal Service has been ineffective at either putting work hours freed up by productivity enhancements to productive work or getting rid of the excess labor.

I believe that a strong basis exists for treating mixed-mail and not-handling costs that are due to inefficiency as institutional costs. For these costs, we neither have a basis for distribution to subclasses nor are we ever likely to find one.

The Commission is expected to select costing methods that reliably reflect the causal relationship between costs and the classes of mail. The Supreme Court and the Commission agree that costs should not be attributed until the Commission has established a "reasonable confidence" that costs are the consequence of providing a particular service, or a "reasoned analysis of cost causation."

"Institutionalizing" volume-variable costs is unusual but not unprecedented. Choosing not to attribute these volume-variable costs to classes and subclasses is well within the Commission's discretion. The Commission encountered a similar situation in Docket No. R90-1 with regard to the costs of intra-Alaska air transportation. In that docket, the Commission conducted extensive deliberations about the proper attribution of the intra-Alaska costs, notwithstanding the fact that all parties agreed that the costs were volume variable. In its Decision, the Commission, citing *National Association of Greeting Card Publishers v. United States Postal Service*, 462 U.S. 810 (1983) (hereafter *NAGCP)*, discusses its

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[93] Ibid.
[94] See MPA-LR-2.
[95] Tr. 12/6652 (witness Degen).

discretion to choose appropriate methods of attributing costs to the various classes of mail.[96]

In that case the Court noted:

> We agree with the Rate Commission's consistent position that Congress did not dictate a specific method for identifying casual relationships between costs and classes of mail, but that the Act "envisions consideration of all appropriate costing approaches." [citation omitted]. The Rate Commission has held that, regardless of method, the Act requires the establishment of a sufficient causal nexus before costs may be attributed. The Rate Commission has variously described that requirement as demanding a "reliable principle of causality, or "reasonable confidence" that costs are the consequence of providing a particular service, or a "reasonable analysis of cost causation."[97]

I recommend that the Commission similarly use its statutory discretion in this case to refrain from attributing to classes and subclasses of mail the portion of volume-variable mixed-mail and not-handling costs that is due to inefficient operations. However, developing an estimate of the inefficient portion of volume-variable mixed-mail and not-handling costs is not a simple matter. There is limited information available in this case to precisely quantify the inefficient portion of these cost categories. However, there are a number of data sources that can be used to develop a set of rough estimates.

First, there is a benchmarking study, "Performance Analysis of Processing and Distribution Facilities: Sources of TFP Improvement," which was performed by Christensen Associates in 1994. Witness Degen is a co-author of the study.[98] This study found that if the bottom 75 percent of facilities could increase their efficiency to the average productivity of the top quartile of facilities, then mail processing costs would decrease by $1.9 to 2.6 billion. On a percentage basis, the Christensen Associates study found that if the bottom 3 quartiles improved efficiency to match the top quartile, mail processing and distribution costs would decrease between 20-25%.[99] Applying the 20-25 percent figure to the mixed-mail and not-handling portion of mail processing costs (about 50%) yields an estimate

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[96] PRC Op. R90-1, para. 3753.
[97] *NAGCP* at 826 (citations omitted).
[98] USPS-LR-H-275.
[99] Id. at 21.

of $1.0 to 1.25 billion for volume-variable, inefficient mixed-and not-handling costs.

During oral cross-examination, witness Degen provided additional support to the idea that these costs should be treated as institutional. He agreed the high costs at the bottom 75 percent of facilities was not due to "such things as the size of letters or the shape of mail, I should say size of flats, weight of parcels or other characteristics of mail, but rather to other factors."[100]

Second, as I discussed earlier, witness Bradley's MODs data shows a decrease in productivity for most mail processing operations since fiscal year 1988. To get another rough estimate of inefficient costs, I calculated how much lower mail processing cost would be if labor productivity were as high in FY 1996 on an operation-by-operation basis as it was in FY 1988.[101] Exhibit MPA 2E details my calculations. I found that volume-variable costs would be almost $900 million lower if productivity in FY 1996 were as high as it was in FY 1988. Using the mixed-mail and not-handling portion (50%) yields an estimate of $450 million for volume-variable, inefficient mixed and not-handling costs due to system wide reductions in productivity.

Third, a review of the composition of not handling costs is also informative. While I believe the explosion in total not-handling costs suggests there is inefficiency in all not-handling activities, the large amount of not-handling costs for the mixed all shapes activity code (5750) and the moving empty equipment activity code (6523) are particularly suggestive. Costs for these activity codes, almost by definition, indicate inefficiency. If an employee is not handling a mailpiece, item, or container but monitoring an operation, for most operations he should receive a shape-specific activity code. The fact that a tally-taker used an even vaguer code –mixed all shapes – that the employee may not have been productively employed at an operation. The not-handling empty equipment code also seems to indicate inefficiency by its very existence. This code is used when an employee who supposedly is moving empty equipment is not handling an empty item or an empty container. Why is this cost category so large? If managed efficiently, these costs

[100] Tr. 12/6657 (witness Degen).
[101] When Witness Bradley provided no data for an operation in FY 1988, I used productivity from FY 1989.

should be very small. Not even considering the inefficient portion of breaks and clocking time, the volume-variable costs just for these two vague and likely inefficient activity codes were about $1.05 billion in Base Year 1996.[102]

While each of these attempts to quantify inefficient mixed-mail and not-handling costs yields different estimates, all yield substantial pools of cost (between $450 million and $1.0 billion) for which the causal relationship to classes and subclasses is not established. I believe it would be reasonable to apply the Christensen Associates TFP improvement estimate of 20 - 25% to the volume variable mixed- and not-handling costs and to treat that pool of costs as institutional. Using the more conservative 20 % figure yields almost exactly $1 billion of volume variable mixed- and not-handling costs that probably should not be distributed to classes and subclasses of mail.[103] MPA exhibit Exh. MPA-2 F shows my revised distribution of mail processing costs by class and subclass with the $1 billion removed.

VI. THE NEED FOR CONTINUED ANALYSIS AND MODERATION IN RATE INCREASES

A. The Need for Additional Information

If the Commission is not willing to treat a portion of volume-variable costs as institutional, the distribution of these costs that witness Stralberg and I propose is the best available on the current record. Unlike witness Degen's proposed distribution, it is reasonable and equitable. However, there is still much information that is needed to develop more accurate distribution keys for this cost segment.

With regard to mixed-mail, the key issue is that there is no adequate substitute for subclass data for the purpose of cost distribution. Proxy assumptions are a very poor substitute. For mixed-mail items, the Postal Service should either figure out a way to achieve a higher percentage of counting or should rethink the entire procedure. The key piece of information that is needed

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[102] TW-T-1.
[103] USPS-T-12 at 24, table 6.

is subclass information. If data collectors can't or won't count the number of pieces of each subclass in an item, perhaps they could simply identify what classes or subclasses of mail are contained in the item. That would provide more data than currently exists and eliminate the need for assumed relationships.

Similarly, for mixed containers, the Postal Service needs to obtain more information not only on what types of items are in the container but also on what types of mail are in the items in the containers. Perhaps, as suggested by witness Stralberg, the Postal Service should consider reinstating some form of identification of subclasses in mixed containers. Such containers may contain mail of only one subclass, although the pieces are not identical.[104]

Collecting information that would allow distribution directly to subclasses would eliminate the need for the current two-tiered system, where tally takers identify the types of items in containers and then witness Degen assumes that the contents of the items are similar to the contents of items outside containers and that loose mail in containers is similar to loose mail outside containers. If the Postal Service identified the subclasses there would be no need for the assumption.

For not-handling costs, the problem is more difficult. Simply observing what an employee is doing and where he is doing it is not enough. We need to determine if the work is productive or non-productive and what classes and subclasses cause the productive work. Not handling mail while selling stamps is productive work. Not handling mail at opening units or manual cases is very likely not productive. To gain more insight into why there is so much nonproductive time, we need to understand how employees are assigned to operations.

This is what we hope will occur as part of our joint industry-Postal Service study of Periodicals costs. We hope that the Postal Service will agree that the study should include a review of scheduling and staffing tools and procedures at various postal facilities. We also plan to examine processing inefficiencies and evaluate the potential to reduce inefficiency and improve operations.

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[104] TW-T-1.

B. Periodicals Cost Coverage and Rate Increase

The Postal Service maintains that the cost coverage proposed for regular rate Periodicals in this docket is 107 percent, admittedly lower than the cost coverage traditionally assigned to this Periodicals subclass by the Commission. However, the 107 percent coverage estimate is predicated on witness Degen's flawed distribution methodology. The Stralberg/Cohen distribution methodology and my revised methodology with inefficient mixed and not-handling costs removed both reduce the overstatement of Periodicals costs that results from witness Degen's proposed distribution. If implemented by the Commission, either of the approaches I advocate would yield a higher cost coverage for regular rate Periodicals at the rate levels proposed by the Postal Service.

In addition, we have discovered an overstatement in the rural carrier costs attributed to Periodicals. This overstatement is described by witness Glick in MPA-T-3. In his testimony, witness Glick presents an improved distribution of rural carrier costs to subclass. As shown in his Exhibit MPA-3C, his proposed distribution would reduce test year after rates costs for Periodicals Regular Rate by $19 million.

I have combined witness Glick's revised rural carrier cost distribution with test year after rates cost distributions for mail processing costs (including piggybacks) based on the methodologies described in part V of this testimony. The procedure used to calculate piggyback factors and roll-forward the revised base year 1996 mail processing cost distributions is described in MPA-LR-1. MPA exhibits Exh. MPA-2F and MPA-2G provide new total attributable costs by class and subclass, incorporating both rural carrier and mail processing cost adjustments. The costs for regular rate periodicals in these exhibits are $1.436 billion and $1.375 billion respectively. If implemented by the Commission, these cost distributions would yield cost coverages of 117.6 percent and 122.8 percent if the Commission adopts the rate increase proposed by the Postal Service for regular rate Periodicals.

Furthermore, even this increased coverage is likely understated given: (1) the still unexplained cost increases for Periodicals in the past ten years; (2) remaining uncertainty with regard to mixed-mail and not-handling tallies and their appropriate distribution to classes and subclasses; and (3) the fact that the automation refugee problem discussed in this testimony affects direct costs as well as mixed-mail and overhead costs. If the Postal Service reassigns employees from automated to allied and other operations, and those employees "work" at allied and other operations while awaiting reassignment back to the automated operations, these employees (and those already there) are likely to work at a slower pace than if they were really needed.

I am pleased that witness O'Hara has freely admitted that the Postal Service cannot explain the apparent increase in Periodicals costs and intends to undertake a study to understand and correct the problem.[105] As he and witness Little point out, the educational, cultural, scientific, and informational value of Periodicals (39 U.S.C. 3622(b)(8)) has historically led to low cost coverage for this mail.[106] Witness O'Hara also points out that the proposed rates also exceed estimated incremental costs, even under the flawed methodology proposed by witness Degen.[107] Thus, the rates cover costs as required by 39 U.S.C. 3622(b)(3). Most importantly, witness O'Hara testifies that the proposed rate level is fair and equitable (39 U.S.C. 3622(b)(1)).[108] I agree that the rate level is fair and equitable, even though based on faulty methodology. The Commission is justified in approving a lower purported cost markup with the understanding that coverage on the basis of properly measured costs should and will increase when costs are properly measured.

I urge the Commission to recommend increases no higher than the average rate increases of 3.5 percent and 3.9 percent proposed by witness O'Hara for Regular Rate Periodicals and Nonprofit Periodicals, respectively.

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[105] USPS-T-30 at 30-31.
[106] USPS-T-30 at 31; MPA-T-1 at?
[107] USPS-T-30 at 31.
[108] Ibid.

Exhibit MPA-2A. USPS Current and Proposed Methods for Distributing Mail Processing Costs to Subclass/Special Service[1]

Tally Type		IOCS/LIOCATT	Degen
Direct	**Direct (0010-4950).** Tallies where IOCS data collector recorded subclass/special service and shape of mail being handled. (87,652 Tallies) • **Piece Handlings** – Tallies where data collector observed employee handling single piece of mail. (65,970 Tallies) • **Counted Items** – Tallies where data collector counted all subclasses and shapes of mail in item (e.g., bundle, tray, con-con, pallet, or sack). (2,726 Tallies) • **Top-Piece Rule Items** – Tallies where employee was handling nonidentical mail that is loose, in a bundle, or in a tray, and data collector applied top-piece rule. (11,541 Tallies) • ***Identical Items and Containers*** – Tallies where employee was handling an item or container (e.g., wiretainer) containing identical mail in terms of mail origin, mail class, subclass, shape, weight, and postage.[2] (6,820 Item Tallies and 595 Container Tallies)	Distributed to subclass/special service based upon subclass information recorded by IOCS data collector.	Distributed to subclass/special service based upon subclass information recorded by IOCS data collector.
	Class Specific (53XX-54XX). Tallies where employee was observed handling specific class of mail but where neither the subclass nor the shape of the mail was recorded. (Included above)	Distributed to subclass/special service in proportion to direct tally costs of same class within CAG and basic function.	Distributed to subclass/special service in proportion to direct tally costs of same class within cost pool.
Mixed	**Uncounted/Empty Items (5600-5750, 6523).** Tallies where employee was observed handling item containing nonidentical mail, and for which data collector did not record any information regarding the subclasses of mail in the item. This category includes tallies where the employee was handling empty items. (6,574 Tallies)	Mixed shape tallies (e.g., mixed letter tallies) in the current method include costs for activity codes 5600-5750. They are distributed to subclass/special service in proportion to direct tally costs of the same shape within CAG and basic function.	Distributed to subclass/special service in proportion to direct item tally costs of the same item type within cost pool (16 item types).
	Identified Containers (5600-5750). Tallies where data collector observed an employee handling a container of nonidentical mail, and for which the data collector identified the contents (e.g., items and loose shapes) of the container. (9,662 Tallies)	See "Mixed – Uncounted/Empty Items."	Distributed to 21 item types/loose shapes based upon identified container contents within cost pool. Distributed to subclass/special service in proportion to direct item tally costs of same item type/loose shape within cost pool.
	Unidentified/Empty Containers (5600-5750, 6523). Tallies where data collector observed employee handling a container of nonidentical mail or an empty container and for which data collector did not identify container contents. (8,128 Tallies)	See "Mixed – Uncounted/Empty Items."	Distributed to subclass/special service in proportion to identical and identified container tally costs of the same type within cost pool (10 types).
Not Handling	**Not Handling (5020-5195, 5600-5750, 60XX-67XX).** Tallies where employee was not handling pieces of mail, items, or containers. (88,854 Tallies)	Distributed to subclass/special service in proportion to distribution of all other mail *processing costs across all basic functions* and CAGs. In current method, this category only includes overhead costs (6521-23).	Distributed to subclass/special service in proportion to distribution of all other mail *processing costs within cost pool.*

[1] Chart Modified from DMA/USPS-T12-20, Attachment 1.

[2] LR-H-49, Appendix C, Page 146.

Exhibit MPA-2B. Stralberg-Cohen Distribution Method for Mail Processing Costs

Tally Type		Stralberg-Cohen Method
DIRECT. Tallies where IOCS data collector recorded class, subclass, or special service of mail being handled.	**Subclass-Specific.** • Piece handlings • Counted items • Top-piece rule items • Identical items and containers	Distributed directly to subclass/special service based upon subclass information recorded by IOCS data collector.
	Class-Specific. Tallies where employee was observed handling specific class of mail but where neither the subclass nor the shape of the mail was recorded.	Distributed to subclass/special service in proportion to direct tally costs of same class.
MIXED. Tallies where employee was handling an item or container containing nonidentical mail, and for which data collector did not record any subclass or class information. This category includes tallies where employee was handling empty items or containers.	**Shape-Specific.** Tallies where data collector recorded the shape or shapes of mail the employee was handling (5610-5700).	Distributed to subclass/special service in proportion to direct tally costs of the same shape within CAG and basic function.
	Other. Tallies where data collector did not record the shape or shapes of mail the employee was handling (Consists primarily of activity codes 5750 and 6523).	Distributed to subclass/special service in proportion to direct tally costs within CAG and basic function.
NOT HANDLING. Tallies where employee was not handling a mailpiece, item, or container.	**Shape-Specific.** Tallies where data collector recorded the shape or shapes of mail associated with the activity the employee was performing (5610-5700).	Distributed to subclass/special service in proportion to direct tally costs of the same shape within CAG and basic function.
	Class-Specific. Tallies where employee was performing activities associated with special delivery, Registry, and Express Mail (6220, 6230, 6231).	Distributed directly to appropriate classes and special services. Before distribution, Express mail costs are reclassified into C/S 3.3.
	Overhead and Carrier-Related. Tallies where data collector observed the employee on break, clocking in or out, moving empty equipment (other than items or containers), performing carrier-related activities or the data collector recorded a mixed all shapes tally (5750, 6521-23, 6420, and 6430)	Distributed to subclass/special service in proportion to direct tally costs within CAG and basic function.
	Window Service. Tallies where employee was observed performing window service activities and associated break and clocking in and out. This category consists of all tallies with activity codes 5020-5195 and 6020-6200 and some tallies with activity codes 6521 and 6522.	Moved into the Window Service cost component (C/S 3.2) and distributed to subclass using the window service distribution keys.
	Administration/Support Costs. Tallies where employee was observed performing administrative/support activities and associated break and clocking in and out. This category consists of all tallies with activity codes 6320-6519 and 6610-6660 and some tallies with activity codes 6521 and 6522.	Moved into the Window Service cost component (C/S 3.2) and distributed to subclass using the administration/support distribution keys.
	Other Not Handling. This category includes central markup (6570), postage due (6580), nixie (6240), and platform acceptance (6210).	Distributed to subclass/special service in proportion to direct tally costs within CAG, basic function, and uniform operation code.

Exhibit MPA-2C. Modified Attribution of BY96 Segment 3 Costs

Class	Subclass	3.1	3.2	3.3	Total Segment 3
First Class	Letters & Parcels	4,824,580	515,633	482,452	5,822,665
First Class	Presort Letters & Parcels	1,022,013	22,798	143,598	1,188,409
First Class	Single Piece Cards	157,814	33,190	19,016	210,020
First Class	Presort Private Cards	47,363	792	5,362	53,517
Priority		317,269	42,667	29,499	389,435
Express		53,623	23,797	52,807	130,227
Mailgrams		114	0	17	131
Periodicals	Within County	13,630	473	2,747	16,850
Periodicals	Regular	374,072	2,260	41,143	417,475
Periodicals	Nonprofit	69,132	243	10,207	79,582
Periodicals	Classroom	3,822	0	387	4,209
Standard (A)	Single Piece Rate	73,726	2,481	6,582	82,789
Standard (A)	ECR	205,602	5,953	67,013	278,568
Standard (A)	Regular	1,360,059	23,106	151,132	1,534,297
Standard (A)	Nonprofit ECR	21,255	980	5,246	27,481
Standard (A)	Nonprofit Regular	338,336	8,409	37,583	384,328
Standard (B)	Parcels - Zone Rate	122,377	7,746	12,225	142,348
Standard (B)	Bound Printed Matter	63,641	641	7,330	71,612
Standard (B)	Special Rate	68,161	3,296	6,082	77,539
Standard (B)	Library Rate	15,091	102	1,170	16,363
USPS		103,620	14,202	10,156	127,978
Free for Blind/Handicapped		8,926	187	744	9,857
International		209,994	24,648	21,895	256,537
Special Services	Registry	31,606	12,087	4,903	48,596
Special Services	Certified	23,209	39,092	11,452	73,753
Special Services	Insurance	937	11,938	851	13,726
Special Services	COD	2,406	3,669	878	6,953
Special Services	Special Delivery	49	153	110	312
Special Services	Money Orders	0	82,983	4,139	87,122
Special Services	Stamped Envelopes	0	1,361	67	1,428
Special Services	Special Handling	277	548	41	866
Special Services	Post Office Box	0	69,153	7,163	76,316
Special Services	Other	88,878	10,208	10,265	109,351
Total Volume Variable		**9,621,582**	**964,796**	**1,154,262**	**11,740,640**
Other		**2,805,963**	**1,059,160**	**850,338**	**4,715,461**
Total Costs		**12,427,545**	**2,023,956**	**2,004,600**	**16,456,101**

Exhibit MPA-2D. Attributed BY96 Clerk & Mailhandler Wage Costs ($000s)

Class	Subclass	USPS Proposal	Stralberg-Cohen	Difference
First Class	Letters & Parcels	5,566,303	5,822,665	256,362
First Class	Presort Letters & Parcels	1,194,689	1,188,409	-6,280
First Class	Single Piece Cards	183,379	210,020	26,641
First Class	Presort Private Cards	41,349	53,517	12,168
Priority		540,853	389,435	-151,418
Express		112,436	130,227	17,791
Mailgrams		88	131	43
Periodicals	Within County	17,388	16,850	-538
Periodicals	Regular	496,960	417,475	-79,485
Periodicals	Nonprofit	88,934	79,582	-9,352
Periodicals	Classroom	6,005	4,209	-1,796
Standard (A)	Single Piece Rate	82,069	82,789	720
Standard (A)	ECR	305,921	278,568	-27,353
Standard (A)	Regular	1,605,824	1,534,297	-71,527
Standard (A)	Nonprofit ECR	32,442	27,481	-4,961
Standard (A)	Nonprofit Regular	385,597	384,328	-1,269
Standard (B)	Parcels - Zone Rate	168,661	142,348	-26,313
Standard (B)	Bound Printed Matter	76,322	71,612	-4,710
Standard (B)	Special Rate	72,257	77,539	5,282
Standard (B)	Library Rate	16,453	16,363	-90
USPS		112,772	127,978	15,206
Free for Blind/Handicapped		11,042	9,857	-1,185
International		252,743	256,537	3,794
Special Services	Registry	31,718	48,596	16,878
Special Services	Certified	63,305	73,753	10,448
Special Services	Insurance	12,818	13,726	908
Special Services	COD	5,968	6,953	985
Special Services	Special Delivery	216	312	96
Special Services	Money Orders	82,277	87,122	4,845
Special Services	Stamped Envelopes	1,341	1,428	87
Special Services	Special Handling	754	866	112
Special Services	Post Office Box	65,299	76,316	11,017
Special Services	Other	89,524	109,351	19,827
Total Volume Variable		**11,723,707**	**11,740,640**	**16,933**
Other		**4,732,392**	**4,715,461**	**-16,931**
Total Costs		**16,456,099**	**16,456,101**	**2**

Exhibit MPA 2E. Calculation of Volume-Variable Cost Based Upon Base Productivity

		Productivity			Volume Variable Cost		
		[1]	[2]	[3]	[4]	[5]	[6]
Facility	Operation	Base	FY 1996	Ratio of 1996 Productivity to Base Year Productivity	Volume Variable Cost (1996 Productivity)	Volume Variable Cost (Base Year Productivity)	Dollar Weighted Average Ratio of 1996 Productivity to Base Productivity
MODS	BCS	7.143	7.289	1.021	643,885	657,129	
MODS	Cancellation & Mail Preparation - metered	3.110	3.393	1.091	188,154	205,271	
MODS	FSM	0.893	0.734	0.822	676,538	556,439	
MODS	LSM	1.562	1.238	0.793	662,170	524,930	
MODS	Manual Flats	0.503	0.473	0.940	445,858	419,195	
MODS	Manual Letters	0.610	0.547	0.897	1,069,834	959,872	
MODS	Manual Parcels	0.191	0.277	1.450	23,719	34,402	
MODS	Manual Priority	0.241	0.225	0.936	99,685	93,270	
MODS	Mechanized Parcels	0.112	0.179	1.599	8,762	14,009	
MODS	OCR	7.219	4.503	0.624	176,220	109,921	
MODS	SPBS - Non Priority	0.198	0.272	1.374	81,666	112,179	
MODS	SPBS - Priority	0.259	0.272	1.047	46,489	48,683	
MODS	**Total**	**N.A.**	**N.A.**	**N.A.**	**4,122,980**	**3,735,299**	**0.906**
BMC	Non-Machinable Outside	0.118	0.118	1.006	19,700	19,809	
BMC	Parcel Sorting Machine	1.714	2.290	1.336	76,707	102,473	
BMC	Sack Sorting Machine	0.547	0.476	0.870	30,521	26,557	
BMC	SPBS & Irregular Parcels (IPP & 115)	0.489	0.441	0.902	46,966	42,349	
BMC	**Total**	**N.A.**	**N.A.**	**N.A.**	**173,894**	**191,189**	**1.099**

Facility	Ratio of 1996 Productivity to Base Year Productivity	Volume Variable Cost (1996 Productivity)	Volume Variable Cost (Base Year Productivity)	Difference
	[7]	[8]	[9]	[10]
MODS	0.906	7,823,779	7,088,115	735,664
BMC	1.099	408,248	448,851	-40,603
Non-MODS	0.906	1,827,050	1,655,254	171,796
Total		**10,059,077**	**9,192,220**	**866,857**

[1] LR-H-148, Procedure from DMA/USPS-T14-16 & 18, first year when Bradley had data (1988 or 1989)
[2] LR-H-148, Procedure from DMA/USPS-T14-16 & 18
[3] = [2] / [1]
[4] USPS-T-12 at 15
[5] = [3] x [4]
[6] = [5] / [4]
[7] = [6]; we applied MODS ratio to Non-MODS facilities as well as MODS facilities
[8] USPS-T-12 at 15
[9] = [7] x [8]
[10] = [9] - [8]

Exhibit MPA-2F Test Year Attributable Cost by Subclass with Stralberg-Cohen Clerks and Mailhandlers Methodology and MPA Rural Carriers Methodology

Class	Subclass	Cost ($000s)
First Class	Letters & Parcels	13,191,392
First Class	Presort Letters & Parcels	4,066,499
First Class	Single Piece Cards	479,268
First Class	Presort Private Cards	189,690
Priority		2,010,114
Express		440,857
Mailgrams		573
Periodicals	Within County	78,211
Periodicals	Regular	1,435,651
Periodicals	Nonprofit	311,933
Periodicals	Classroom	10,422
Standard (A)	Single Piece Rate	925
Standard (A)	ECR	1,818,932
Standard (A)	Regular	5,034,888
Standard (A)	Nonprofit ECR	117,655
Standard (A)	Nonprofit Regular	1,106,742
Standard (B)	Parcels - Zone Rate	708,195
Standard (B)	Bound Printed Matter	336,962
Standard (B)	Special Rate	266,780
Standard (B)	Library Rate	48,925
Free for Blind/Handicapped		29,557
International		1,212,312
Special Services	Registry	117,815
Special Services	Certified	347,785
Special Services	Insurance	49,686
Special Services	COD	18,532
Special Services	Money Orders	153,072
Special Services	Stamped Envelopes	12,386
Special Services	Special Handling	1,496
Special Services	Post Office Box	606,314
Special Services	Other	92,326

Exhibit MPA-2G. Test Year Attributable Cost by Subclass with Stralberg-Cohen Clerks and Mailhandlers (Treating Inefficient Mixed and Not Handling Costs as Institutional) Methodology and MPA Rural Carriers Methodology

Class	Subclass	Cost ($000s)
First Class	Letters & Parcels	12,408,113
First Class	Presort Letters & Parcels	3,879,480
First Class	Single Piece Cards	455,354
First Class	Presort Private Cards	179,887
Priority		1,954,165
Express		431,099
Mailgrams		556
Periodicals	Within County	76,073
Periodicals	Regular	1,375,095
Periodicals	Nonprofit	301,199
Periodicals	Classroom	9,933
Standard (A)	ECR	1,784,709
Standard (A)	Regular	4,760,423
Standard (A)	Nonprofit ECR	114,462
Standard (A)	Nonprofit Regular	1,046,073
Standard (B)	Parcels - Zone Rate	686,109
Standard (B)	Bound Printed Matter	324,599
Standard (B)	Special Rate	253,425
Standard (B)	Library Rate	46,346
Free for Blind/Handicapped		27,851
International		1,179,654
Special Services	Registry	110,027
Special Services	Certified	342,659
Special Services	Insurance	49,507
Special Services	COD	18,148
Special Services	Money Orders	147,365
Special Services	Stamped Envelopes	18,015
Special Services	Special Handling	1,361
Special Services	Post Office Box	596,013
Special Services	Other	70,692

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon all participants of record in this proceeding in accordance with section 12 of the Rules of Practice.

James R. Cregan

December 30, 1997